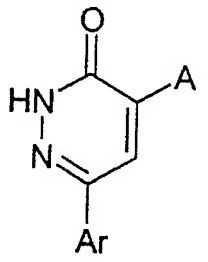
AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application.

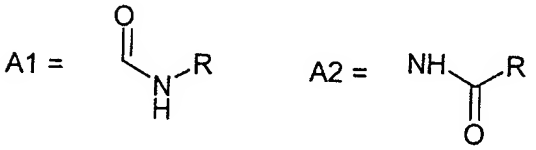
Listing of Claims:

1. (Currently amended) A compound of formula (I)



(I)

wherein A represents A1 or A2



;

R is unsubstituted or at least monosubstituted C_1-C_{10}-alkyl, aryl, aryl-(C_1-C_{10}-alkyl)-, heteroaryl, heteroaryl-(C_1-C_{10}-alkyl)-, heterocyclyl, heterocyclyl-(C_1-C_{10}-alkyl)-, C_3-C_{10}-cycloalkyl, polycycloalkyl, C_2-C_{10}-alkenyl or C_2-C_{10}-alkinyl,

where the substituents are chosen from halogen, -CN, C_1-C_{10}-alkyl, -NO_2, -OR1, -C(O)OR1, -O-C(O)R1, -NR1R2, -NHC(O)R1, -C(O)NR1R2, -SR1, -S(O)R1, -SO_2R1, -$NHSO_2$R1, -SO_2NR1R2, -C(S)NR1R2, -NHC(S)R1, -O-SO_2R1, -SO_2-O-R1, oxo, -C(O)R1, -C(NH)NH_2, heterocyclyl, C_3-C_{10}-cycloalkyl, aryl-(C_1-C_6-alkyl)-, aryl, heteroaryl, trifluoromethyl, trifluoromethylsulfanyl and trifluoromethoxy,

and the substituents aryl, heterocyclyl and heteroaryl may ~~in turn~~ further be at least monosubstituted with C_1-C_6-alkyl, C_1-C_6-alkoxy, halogen, trifluoromethyl, trifluoromethoxy or OH;

Ar is unsubstituted or at least monosubstituted aryl or heteroaryl;

where the substituents are chosen from halogen, -CN, NO_2, C_1-C_{10}-alkyl, -OR1, -C(O)OR1, -O-C(O)R1, -NR1R2, -NHC(O)R1, -C(O)NR1R2, -NHC(S)R1, -C(S)NR1R2, -SR1, -S(O)R1, $-SO_2R1$, $-NHSO_2R1$, $-SO_2NR1R2$, $-O-SO_2R1$, $-SO_2-O-R1$, aryl, heteroaryl, aryl-(C_1-C_6-alkyl)-, formyl, trifluoromethyl and trifluoromethoxy,

and the substituents aryl and heteroaryl may ~~in turn~~ further be at least monosubstituted with C_1-C_6-alkyl, C_1-C_6-alkoxy, halogen, trifluoromethyl, trifluoromethoxy or OH;

R1 and R2, independently from each other, are

hydrogen;

unsubstituted or at least monosubstituted C_1-C_{10}-alkyl, C_3-C_{10}-cycloalkyl, aryl, aryl-(C_1-C_{10}-alkyl)-, C_2-C_{10}-alkenyl, C_2-C_{10}-alkinyl, heterocyclyl, heterocyclyl-(C_1-C_{10}-alkyl)- or heteroaryl, where the substituents are chosen from halogen, C_1-C_6-alkyl, C_1-C_6-alkoxy, CN, NO_2 , NH_2, (C_1-C_6-alkyl)amino-, di(C_1-C_6-alkyl)amino-, OH, COOH, -COO-(C_1-C_6-alkyl), $-CONH_2$, formyl, trifluoromethyl and trifluoromethoxy;

heteroaryl is a 5 to 10-membered, aromatic, mono- or bicyclic heterocycle containing one or more heteroatoms chosen from N, O [[und]] and S;

aryl is phenyl, indanyl, indenyl or naphthyl;

heterocyclyl is a 5 to 10-membered, aliphatic, mono- or bicyclic heterocycle containing one or more heteroatoms chosen from N, O and S;

or the racemates, enantiomers, diastereoisomers and mixtures thereof, the tautomers or the physiologically acceptable salts thereof;

with the proviso that
(1) A is not -C(O)NH(C_1-C_6-alkyl), when Ar is phenyl which is at least monosubstituted with heterocyclyl or heteroaryl containing nitrogen,
(2) the compound is not 3-{4-(3,4,5-trimethoxyanilinocarbonyl)-3-oxo-2,3-dihydropyridazine-6-yl}-2-phenyl-pyrazolo[1,5-a]pyridine; 3-{4-(N-ethoxycarbonylmethyl)-carbamoyl-3-oxo-2,3-dihydro-pyridazine-6-yl}-2-phenyl-pyrazolo[1,5-a]pyridine; 3-{4-(N-carboxymethyl)-carbamoyl-3-oxo-2,3-dihydro-pyridazine-6-yl}-2-phenyl-pyrazolo[1,5-a]pyridine; 6-(4-cyanophenyl)-4[(4-carboxybutyl)-aminocarbonyl]-2H-pyridazin-3-one; or 6-(4-methoxyphenyl)-4-methylcarbamoyl-2H-pyridazin-3-one, and
(3) when A is NHCOCH(CH_3)$_2$, Ar is not unsubstituted or at least monosubstituted bicyclic heteroaryl.

2. (Currently amended) The compound according to claim 1, wherein in the formula (I)

A is A1;

R is unsubstituted or at least monosubstituted C_1-C_{10}-alkyl, aryl, aryl-(C_1-C_{10}-alkyl)-, heteroaryl, heteroaryl-(C_1-C_{10}-alkyl)-, heterocyclyl, heterocyclyl-(C_1-C_{10}-alkyl)-, C_3-C_{10}-cycloalkyl, polycycloalkyl, C_2-C_{10}-alkenyl or C_2-C_{10}-alkinyl,

where the substituents are chosen from halogen, -CN, C_1-C_{10}-alkyl, -NO_2, -OR1, -C(O)OR1, -O-C(O)R1, -NR1R2, -NHC(O)R1, -C(O)NR1R2, -SR1, -S(O)R1, -SO_2R1, -NHSO_2R1, -SO_2NR1R2, -C(S)NR1R2, -NHC(S)R1, -O-SO_2R1, -SO_2-O-R1, oxo, -C(O)R1, -C(NH)NH_2, heterocyclyl, C_3-C_{10}-cycloalkyl, aryl-(C_1-C_6-alkyl)-, aryl, heteroaryl, trifluoromethyl, trifluoromethylsulfanyl and trifluoromethoxy,

and the substituents aryl, heterocyclyl and heteroaryl may ~~in turn~~ further be at least monosubstituted with C_1-C_6-alkyl, C_1-C_6-alkoxy, halogen, trifluoromethyl, trifluoromethoxy or OH;

R1 and R2, independently from each other, are

hydrogen;

unsubstituted or at least monosubstituted C_1-C_{10}-alkyl, C_3-C_{10}-cycloalkyl, aryl, aryl-(C_1-C_{10}-alkyl)-, C_2-C_{10}-alkenyl, C_2-C_{10}-alkinyl, heterocyclyl, heterocyclyl-(C_1-C_{10}-alkyl)- or heteroaryl, where the substituents are chosen from halogen, C_1-C_6-alkyl, C_1-C_6-alkoxy, CN, NO_2 , NH_2, (C_1-C_6-alkyl)amino-, di(C_1-C_6-alkyl)amino-, OH, COOH, -COO-(C_1-C_6-alkyl), -$CONH_2$, formyl, trifluoromethyl and trifluoromethoxy;

heteroaryl is a 5 to 10-membered, aromatic, mono- or bicyclic heterocycle containing one or more heteroatoms chosen from N, O and S;

aryl is phenyl, indanyl, indenyl or naphthyl;

heterocyclyl is a 5 to 10-membered, aliphatic, mono- or bicyclic heterocycle containing one or more heteroatoms chosen from N, O and S;

or the racemates, enantiomers, diastereoisomers and mixtures thereof, the tautomers or the physiologically acceptable salts thereof.

3. (Currently amended) The compound according to claim 1, wherein in the formula (I)

R is unsubstituted or at least monosubstituted C_1-C_{10}-alkyl, aryl, aryl-(C_1-C_{10}-alkyl)-, heterocyclyl, heterocyclyl-(C_1-C_{10}-alkyl)-, C_3-C_{10}-cycloalkyl, heteroaryl or heteroaryl-(C_1-C_{10}-alkyl)-,

where the substituents are chosen from halogen, -CN, C_1-C_{10}-[[Alkyl]]alkyl, $-NO_2$, -OR1, -C(O)OR1, -O-C(O)R1, -NR1R2, -NHC(O)R1, -C(O)NR1R2, -SR1, -S(O)R1, $-SO_2R1$, $-NHSO_2R1$, $-SO_2NR1R2$, -C(S)NR1R2, -NHC(S)R1, $-O-SO_2R1$, $-SO_2-O-R1$, oxo, -C(O)R1, $-C(NH)NH_2$, heterocyclyl, C_3-C_{10}-cycloalkyl, aryl-(C_1-C_6-alkyl)-, aryl, heteroaryl, trifluoromethyl, trifluoromethylsulfanyl and trifluoromethoxy,

and the substituents aryl, heterocyclyl and heteroaryl may ~~in turn~~ further be at least monosubstituted with C_1-C_6-alkyl, C_1-C_6-alkoxy, halogen, trifluoromethyl, trifluoroethoxy or OH;

R1 and R2, independently from each other, are

hydrogen;

unsubstituted or at least monosubstituted C_1-C_{10}-alkyl, C_3-C_{10}-cycloalkyl, aryl, aryl-(C_1-C_{10}-alkyl)-, C_2-C_{10}-alkenyl, C_2-C_{10}-alkinyl, heterocyclyl, heterocyclyl-(C_1-C_{10}-alkyl)- or heteroaryl, where the substituents are chosen from halogen, C_1-C_6-alkyl, C_1-C_6-alkoxy, CN, NO_2 , NH_2, (C_1-C_6-alkyl)ami no-, di(C_1-C_6-alkyl)amino-, OH, COOH, -COO-(C_1-C_6-alkyl), $-CONH_2$, formyl, trifluoromethyl and trifluoromethoxy;

heteroaryl is a 5 to 10-membered, aromatic, mono- or bicyclic heterocycle containing one or more heteroatoms chosen from N, O and S;

aryl is phenyl, indanyl, indenyl or naphthyl;

heterocyclyl is a 5 to 10-membered, aliphatic, mono- or bicyclic heterocycle, containing one or more heteroatoms chosen from N, O and S;

or the racemates, enantiomers, diastereoisomers and mixtures thereof, the tautomers or the physiologically acceptable salts thereof.

4. (Currently amended) The compound according to claim 1, wherein in the formula (I)

Ar is unsubstituted or at least monosubstituted phenyl, pyridinyl, pyrimidinyl, pyrazolyl, thiophenyl, isoxazolyl, benzo[b]thiophenyl, benzodioxolyl or thiazolo[3,2-b][1,2,4]-thiazolyl,

where the substituents are chosen from halogen, -CN, NO_2, C_1-C_{10}-alkyl, -OR1, -C(O)OR1, -O-C(O)R1, -NR1R2, -NHC(O)R1, -C(O)NR1R2, -NHC(S)R1, -C(S)NR1R2, -SR1, -S(O)R1, -SO_2R1, -NHSO_2R1, -SO_2NR1R2, -O-SO_2R1, -SO_2-O-R1, aryl, heteroaryl, aryl-(C_1-C_6-alkyl)-, formyl, trifluoromethyl and trifluoromethoxy,

and the substituents aryl and heteroaryl may ~~in turn~~ further be at least monosubstituted with C_1-C_6-alkyl, C_1-C_6-alkoxy, halogen, trifluoromethyl, trifluoromethoxy or OH;

R1 and R2, independently from each other, are

hydrogen;

unsubstituted or at least monosubstituted C_1-C_{10}-alkyl, C_3-C_{10}-cycloalkyl, aryl, aryl-(C_1-C_{10}-alkyl)-, C_2-C_{10}-alkenyl, C_2-C_{10}-alkinyl, heterocyclyl, heterocyclyl-(C_1-C_{10}-alkyl)- or heteroaryl, where the substituents are chosen from halogen, C_1-C_6-alkyl, C_1-C_6-alkoxy, CN, NO_2 , NH_2, (C_1-C_6-alkyl) amino-, di(C_1-C_6-alkyl)amino-, OH, COOH, -COO-(C_1-C_6-alkyl), -$CONH_2$, formyl, trifluoromethyl and trifluoromethoxy;

heteroaryl is a 5 to 10-membered aromatic, mono- or bicyclic heterocycle, containing one or more heteroatoms chosen from N, O and S;

aryl is phenyl, indanyl, indenyl or naphthyl;

heterocyclyl is a 5 to 10-membered aliphatic, mono- or bicyclic heterocycle, containing one or more heteroatoms chosen from N, O and S;

or the racemates, enantiomers, diastereoisomers and mixtures thereof, the tautomers or the physiologically acceptable salts thereof.

5. (Currently amended) The compound according to claim 1, wherein in the formula (I)

A is A1;

R is unsubstituted or at least monosubstituted aryl-(C_1-C_6-alkyl)- heteroaryl-(C_1-C_6-alkyl)- or heterocyclyl-(C_1-C_6-alkyl)-,

where the substituents are chosen from halogen, C_1-C_6-alkyl, -OH, -O-aryl, C_1-C_6-alkoxy, -O-(C_1-C_6-alkylen)-N(C_1-C_6-alkyl)$_2$, -C(O)OH, -C(O)O-(C_1-C_6-alkyl), -NH_2, -N(C_1-C_6-alkyl)$_2$, -NH(C_1-C_6-alkyl), -NH(C_1-C_{10}-cycloalkyl), -C(O)NH_2, -C(O)NH-heteroaryl, -C(O)NH-(C_1-C_6-alkyl), -SO_2(C_1-C_6-alkyl), -SO_2NH_2, -C(O)-heterocyclyl, -C(NH)NH_2, heterocyclyl, aryl-(C_1-C_6-alkyl)-, aryl, trifluoromethyl, and trifluoromethoxy,

and the substituents aryl, heterocyclyl and heteroaryl may ~~in turn~~ further be at least monosubstituted with C_1-C_3-alkyl, C_1-C_3-alkoxy, fluorine, chlorine, bromine, trifluoromethyl, trifluoromethoxy or OH;

heteroaryl is imidazolyl, thiophenyl, furanyl, isoxazolyl, pyridinyl, pyrimidinyl, benzoimidazolyl, indolyl or benzodioxolyl;

aryl is phenyl or naphthyl;

heterocyclyl is morpholinyl, piperazinyl or piperidinyl;

or the racemates, enantiomers, diastereoisomers and mixtures thereof, the tautomers or the physiologically acceptable salts thereof.

6. (Currently amended) The compound according to claim 1, wherein in the formula (I)

A is A1;

Ar is unsubstituted or at least monosubstituted phenyl, pyridin-4-yl or pyrimidin-4-yl,

where the substituents are chosen from halogen, C_1-C_6-alkyl, -OH, C_1-C_6-alkoxy, -C(O)OH, -C(O)O-(C_1-C_6-alkyl), -NH_2, -N(C_1-C_6-alkyl)$_2$, -NH(C_1-C_6-alkyl), -NH(C_1-C_{10}-cycloalkyl), -NH(heterocyclyl-(C_1-C_6-alkyl-)), -NH(aryl-(C_1-C_6-alkyl-)), -C(O)NH_2, -C(O)NH-(C_1-C_6-alkyl), aryl, and heteroaryl,

and the substituents aryl, heterocyclyl and heteroaryl may ~~in turn~~ further be at least monosubstituted with C_1-C_3-alkyl, C_1-C_3-alkoxy, fluorine, chlorine, bromine, trifluoromethyl, trifluoromethoxy or OH;

heteroaryl is pyridinyl or pyrimidinyl;

aryl is phenyl or naphthyl;

heterocyclyl is morpholinyl, piperazinyl or piperidinyl;

or the racemates, enantiomers, diastereoisomers and mixtures thereof, the tautomers or the physiologically acceptable salts thereof.

7. (Currently amended) The compound according to claim 1, wherein in the formula (I)

A is A1;

R is unsubstituted or at least monosubstituted benzyl, phenylethyl-, phenylpropyl-, piperazinylpropyl-, pyridinylmethyl-, pyridinylethyl- or pyridinylpropyl-,

where the substituents are chosen from chlorine, bromine, fluorine, trifluoromethyl, methyl, ethyl, propyl, methoxycarbonyl and carboxy;

Ar is unsubstituted or at least monosubstituted pyridin-4-yl, pyrimidin-4-yl or phenyl,

where the substituents are chosen from methylamino-, ethylamino-, propylamino-, butylamino-, hydroxy, methoxy, ethoxy, methyl, ethyl, propyl, (phenylethyl)amino-, benzylamino-, and (morpholinylethyl)amino-;

or the racemates, enantiomers, diastereoisomers and mixtures thereof, the tautomers or the physiologically acceptable salts thereof.

8. (Original) The compound according to claim 1 chosen from

6-(2-butylamino-pyrimidin-4-yl)-3-oxo-2,3-dihydro-pyridazine-4-carboxylic acid (3-pyridin- 3-yl-propyl)-amide,

6-(4-hydroxy-3-methoxy-phenyl)-3-oxo-2,3-dihydro-pyridazine-4-carboxylic acid (3-pyridin-3-yl-propyl)-amide,

6-(4-hydroxy-phenyl)-3-oxo-2,3-dihydro-pyridazine-4-carboxylic acid (3-pyridin-3-yl-propyl)-amide,

6-(2-ethylamino-pyrimidin-4-yl)-3-oxo-2,3-dihydro-pyridazine-4-carboxylic acid 4-chloro-benzylamide,

6-(3-chloro-4-hydroxy-phenyl)-3-oxo-2,3-dihydro-pyridazine-4-carboxylic acid 4-chloro-benzylamide,

4-({[6-(4-hydroxy-3-methoxy-phenyl)-3-oxo-2,3-dihydro-pyridazine-4-carbonyl]-amino}-methyl)-benzoic acid,

6-(2-butylamino-pyrimidin-4-yl)-3-oxo-2,3-dihydro-pyridazine-4-carboxylic acid (pyridin-3-yl-methyl)-amide,

6-(3-fluoro-4-hydroxy-phenyl)-3-oxo-2,3-dihydro-pyridazine-4-carboxylic acid 4-chloro-benzylamide,

6-[2-(2-morpholin-4-yl-ethylamino)-pyrimidin-4-yl]-3-oxo-2,3-dihydro-pyridazine-4-carboxylic acid 4-chloro-benzylamide,

N-(3,4-dichlorobenzyl)-3-oxo-6-pyridin-4-yl-2,3-dihydropyridazin-4-carboxamide,

3-oxo-6-pyridin-4-yl-2,3-dihydro-pyridazine-4-carboxylic acid [2-(2-chloro-phenyl)-ethyl]-amide,

6-(2-methylamino-pyridin-4-yl)-3-oxo-2,3-dihydro-pyridazine-4-carboxylic acid 4-chloro-benzyl amide,

R-3-oxo-6-[2-(1-phenyl-ethylamino)-pyrimidin-4-yl]-2,3-dihydro-pyridazine-4-carboxylic acid (3-pyridin-3-yl-propyl)-amide,

6-(2-butylamino-pyrimidin-4-yl)-3-oxo-2,3-dihydro-pyridazine-4-carboxylic acid [3-(4-methyl-piperazin-1-yl)-propyl]-amide,

4-{[(3-oxo-6-pyridin-4-yl-2,3-dihydro-pyridazine-4-carbonyl)-amino]-methyl}-benzoic acid methyl ester,

6-(2-methylamino-pyrimidin-4-yl)-3-oxo-2,3-dihydro-pyridazine-4-carboxylic acid (3-pyridin-3-yl-propyl)-amide,

6-(4-hydroxy-3-methoxy-phenyl)-3-oxo-2,3-dihydro-pyridazine-4-carboxylic acid 4-chloro-benzylamide,

6-(2-methylamino-pyrimidin-4-yl)-3-oxo-2,3-dihydro-pyridazine-4-carboxylic acid 4-chloro-benzylamide,

6-(4-hydroxy-phenyl)-3-oxo-2,3-dihydro-pyridazine-4-carboxylic acid 4-chloro-benzylamide,

3-oxo-6-pyridin-4-yl-2,3-dihydro-pyridazine-4-carboxylic acid 4-bromo-benzylamide,

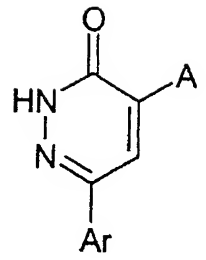
N-(2,4-dichlorobenzyl)-3-oxo-6-pyridin-4-yl-2,3-dihydropyridazine-4-carboxamide,

3-oxo-6-pyridin-4-yl-2,3-dihydro-pyridazine-4-carboxylic acid 4-chloro-2-fluoro-benzylamide, and

N-(4-chlorobenzyl)-3-oxo-6-pyridin-4-yl-2,3-dihydropyridazine-4-carboxamide;

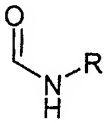
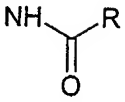
or the racemates, enantiomers, diastereoisomers and mixtures thereof, the tautomers or the physiologically acceptable salts thereof.

9. (Currently amended) A method for inhibiting CDK2 in a patient requiring such treatment comprising administering a physiologically active amount of a compound ~~according to claim 1~~of formula (I)



(I)

wherein A represents A1 or A2

A1 =  A2 =  ;

R is unsubstituted or at least monosubstituted C_1-C_{10}-alkyl, aryl, aryl-(C_1-C_{10}-alkyl)-, heteroaryl, heteroaryl-(C_1-C_{10}-alkyl)-, heterocyclyl, heterocyclyl-(C_1-C_{10}-alkyl)-, C_3-C_{10}-cycloalkyl, polycycloalkyl, C_2-C_{10}-alkenyl or C_2-C_{10}-alkinyl,

where the substituents are chosen from halogen, -CN, C_1-C_{10}-alkyl, $-NO_2$, -OR1, -C(O)OR1, -O-C(O)R1, -NR1R2, -NHC(O)R1, -C(O)NR1R2, -SR1, -S(O)R1, $-SO_2R1$, $-NHSO_2R1$, $-SO_2NR1R2$, -C(S)NR1R2, -NHC(S)R1, $-O-SO_2R1$, $-SO_2-O-R1$, oxo, -C(O)R1, $-C(NH)NH_2$, heterocyclyl, C_3-C_{10}-cycloalkyl, aryl-(C_1-C_6-alkyl)-, aryl, heteroaryl, trifluoromethyl, trifluoromethylsulfanyl and trifluoromethoxy,

and the substituents aryl, heterocyclyl and heteroaryl may further be at least monosubstituted with C_1-C_6-alkyl, C_1-C_6-alkoxy, halogen, trifluoromethyl, trifluoromethoxy or OH;

Ar is unsubstituted or at least monosubstituted aryl or heteroaryl;

where the substituents are chosen from halogen, -CN, NO_2, C_1-C_{10}-alkyl, -OR1, -C(O)OR1, -O-C(O)R1, -NR1R2, -NHC(O)R1, -C(O)NR1R2, -NHC(S)R1, -C(S)NR1R2, -SR1, -S(O)R1, $-SO_2R1$,

-$NHSO_2R1$, -SO_2NR1R2, -O-SO_2R1, -SO_2-O-R1, aryl, heteroaryl, aryl-(C_1-C_6-alkyl)-, formyl, trifluoromethyl and trifluoromethoxy,

and the substituents aryl and heteroaryl may further be at least monosubstituted with C_1-C_6-alkyl, C_1-C_6-alkoxy, halogen, trifluoromethyl, trifluoromethoxy or OH;

R1 and R2, independently from each other, are

hydrogen;

unsubstituted or at least monosubstituted C_1-C_{10}-alkyl, C_3-C_{10}-cycloalkyl, aryl, aryl-(C_1-C_{10}-alkyl)-, C_2-C_{10}-alkenyl, C_2-C_{10}-alkinyl, heterocyclyl, heterocyclyl-(C_1-C_{10}-alkyl)- or heteroaryl, where the substituents are chosen from halogen, C_1-C_6-alkyl, C_1-C_6-alkoxy, CN, NO_2 , NH_2, (C_1-C_6-alkyl)amino-, di(C_1-C_6-alkyl)amino-, OH, COOH, -COO-(C_1-C_6-alkyl), -$CONH_2$, formyl, trifluoromethyl and trifluoromethoxy;

heteroaryl is a 5 to 10-membered, aromatic, mono- or bicyclic heterocycle containing one or more heteroatoms chosen from N, O and S;

aryl is phenyl, indanyl, indenyl or naphthyl;

heterocyclyl is a 5 to 10-membered, aliphatic, mono- or bicyclic heterocycle containing one or more heteroatoms chosen from N, O and S;

or the racemates, enantiomers, diastereoisomers and mixtures thereof, the tautomers or the physiologically acceptable salts thereof;

with the proviso that
(1) A is not -C(O)NH(C_1-C_6-alkyl), when Ar is phenyl which is at least monosubstituted with heterocyclyl or heteroaryl containing nitrogen,

(2) the compound is not 6-(4-cyanophenyl)-4[(4-carboxybutyl)-aminocarbonyl]-2H-pyridazin-3-one or 6-(4-methoxyphenyl)-4-methylcarbamoyl-2H-pyridazin-3-one, and
(3) when A is $NHCOCH(CH_3)_2$, Ar is not unsubstituted or at least monosubstituted bicyclic heteroaryl.

10. (Currently amended) [[A]] The method ~~for inhibiting CDK2 in a patient requiring such treatment comprising administering a physiologically active amount of a compound according to claim 2~~ according to claim 9, wherein in the formula (I)

A is A1;

R is unsubstituted or at least monosubstituted C_1-C_{10}-alkyl, aryl, aryl-(C_1-C_{10}-alkyl)-, heteroaryl, heteroaryl-(C_1-C_{10}-alkyl)-, heterocyclyl, heterocyclyl-(C_1-C_{10}-alkyl)-, C_3-C_{10}-cycloalkyl, polycycloalkyl, C_2-C_{10}-alkenyl or C_2-C_{10}-alkinyl,

where the substituents are chosen from halogen, -CN, C_1-C_{10}-alkyl, $-NO_2$, -OR1, -C(O)OR1, -O-C(O)R1, -NR1R2, -NHC(O)R1, -C(O)NR1R2, -SR1, -S(O)R1, $-SO_2R1$, $-NHSO_2R1$, $-SO_2NR1R2$, -C(S)NR1R2, -NHC(S)R1, $-O-SO_2R1$, $-SO_2$-O-R1, oxo, -C(O)R1, $-C(NH)NH_2$, heterocyclyl, C_3-C_{10}-cycloalkyl, aryl-(C_1-C_6-alkyl)-, aryl, heteroaryl, trifluoromethyl, trifluoromethylsulfanyl and trifluoromethoxy,

and the substituents aryl, heterocyclyl and heteroaryl may further be at least monosubstituted with C_1-C_6-alkyl, C_1-C_6-alkoxy, halogen, trifluoromethyl, trifluoromethoxy or OH;

R1 and R2, independently from each other, are

hydrogen;

unsubstituted or at least monosubstituted C_1-C_{10}-alkyl, C_3-C_{10}-cycloalkyl, aryl, aryl-(C_1-C_{10}-alkyl)-, C_2-C_{10}-alkenyl, C_2-C_{10}-alkinyl, heterocyclyl, heterocyclyl-(C_1-C_{10}-alkyl)- or heteroaryl, where the substituents are chosen from halogen, C_1-C_6-alkyl, C_1-C_6-alkoxy, CN, NO_2 , NH_2, (C_1-C_6-alkyl)amino-, di(C_1-C_6-alkyl)amino-, OH, COOH, -COO-(C_1-C_6-alkyl), -$CONH_2$, formyl, trifluoromethyl and trifluoromethoxy;

heteroaryl is a 5 to 10-membered, aromatic, mono- or bicyclic heterocycle containing one or more heteroatoms chosen from N, O and S;

aryl is phenyl, indanyl, indenyl or naphthyl;

heterocyclyl is a 5 to 10-membered, aliphatic, mono- or bicyclic heterocycle containing one or more heteroatoms chosen from N, O and S;

or the racemates, enantiomers, diastereoisomers and mixtures thereof, the tautomers or the physiologically acceptable salts thereof.

11. (Currently amended) [[A]] The method ~~for inhibiting CDK2 in a patient requiring such treatment comprising administering a physiologically active amount of a compound according to claim 3~~ according to claim 9, wherein in the formula (I)

R is unsubstituted or at least monosubstituted C_1-C_{10}-alkyl, aryl, aryl-(C_1-C_{10}-alkyl)-, heterocyclyl, heterocyclyl-(C_1-C_{10}-alkyl)-, C_3-C_{10}-cycloalkyl, heteroaryl or heteroaryl-(C_1-C_{10}-alkyl)-,

where the substituents are chosen from halogen, -CN, C_1-C_{10}-alkyl, -NO_2, -OR1, -C(O)OR1, -O-C(O)R1, -NR1R2, -NHC(O)R1, -C(O)NR1R2, -SR1, -S(O)R1, -SO_2R1, -$NHSO_2$R1, -SO_2NR1R2, -C(S)NR1R2, -NHC(S)R1, -O-SO_2R1, -SO_2-O-R1, oxo, -C(O)R1, -C(NH)NH_2, heterocyclyl, C_3-C_{10}-cycloalkyl, aryl-(C_1-C_6-alkyl)-, aryl, heteroaryl, trifluoromethyl, trifluoromethylsulfanyl and trifluoromethoxy,

and the substituents aryl, heterocyclyl and heteroaryl may further be at least monosubstituted with C_1-C_6-alkyl, C_1-C_6-alkoxy, halogen, trifluoromethyl, trifluoroethoxy or OH;

R1 and R2, independently from each other, are

hydrogen;

unsubstituted or at least monosubstituted C_1-C_{10}-alkyl, C_3-C_{10}-cycloalkyl, aryl, aryl-(C_1-C_{10}-alkyl)-, C_2-C_{10}-alkenyl, C_2-C_{10}-alkinyl, heterocyclyl, heterocyclyl-(C_1-C_{10}-alkyl)- or heteroaryl, where the substituents are chosen from halogen, C_1-C_6-alkyl, C_1-C_6-alkoxy, CN, NO_2 , NH_2, (C_1-C_6-alkyl)ami no-, di(C_1-C_6-alkyl)amino-, OH, COOH, -COO-(C_1-C_6-alkyl), -$CONH_2$, formyl, trifluoromethyl and trifluoromethoxy;

heteroaryl is a 5 to 10-membered, aromatic, mono- or bicyclic heterocycle containing one or more heteroatoms chosen from N, O and S;

aryl is phenyl, indanyl, indenyl or naphthyl;

heterocyclyl is a 5 to 10-membered, aliphatic, mono- or bicyclic heterocycle, containing one or more heteroatoms chosen from N, O and S;

or the racemates, enantiomers, diastereoisomers and mixtures thereof, the tautomers or the physiologically acceptable salts thereof.

12. (Currently amended) [[A]] The method ~~for inhibiting CDK2 in a patient requiring such treatment comprising administering a physiologically active amount of a compound according to claim 4~~ according to claim 9, wherein in the formula (I)

Ar is unsubstituted or at least monosubstituted phenyl, pyridinyl, pyrimidinyl, pyrazolyl, thiophenyl, isoxazolyl, benzo[b]thiophenyl, benzodioxolyl or thiazolo[3,2-b][1,2,4]-thiazolyl,

where the substituents are chosen from halogen, -CN, NO_2, C_1-C_{10}-alkyl, -OR1, -C(O)OR1, -O-C(O)R1, -NR1R2, -NHC(O)R1, -C(O)NR1R2, -NHC(S)R1, -C(S)NR1R2, -SR1, -S(O)R1, $-SO_2R1$, $-NHSO_2R1$, $-SO_2NR1R2$, $-O-SO_2R1$, $-SO_2-O-R1$, aryl, heteroaryl, aryl-(C_1-C_6-alkyl)-, formyl, trifluoromethyl and trifluoromethoxy,

and the substituents aryl and heteroaryl may further be at least monosubstituted with C_1-C_6-alkyl, C_1-C_6-alkoxy, halogen, trifluoromethyl, trifluoromethoxy or OH;

R1 and R2, independently from each other, are

hydrogen;

unsubstituted or at least monosubstituted C_1-C_{10}-alkyl, C_3-C_{10}-cycloalkyl, aryl, aryl-(C_1-C_{10}-alkyl)-, C_2-C_{10}-alkenyl, C_2-C_{10}-alkinyl, heterocyclyl, heterocyclyl-(C_1-C_{10}-alkyl)- or heteroaryl, where the substituents are chosen from halogen, C_1-C_6-alkyl, C_1-C_6-alkoxy, CN, NO_2, NH_2, (C_1-C_6-alkyl) amino-, di(C_1-C_6-alkyl)amino-, OH, COOH, -COO-(C_1-C_6-alkyl), $-CONH_2$, formyl, trifluoromethyl and trifluoromethoxy;

heteroaryl is a 5 to 10-membered aromatic, mono- or bicyclic heterocycle, containing one or more heteroatoms chosen from N, O and S;

aryl is phenyl, indanyl, indenyl or naphthyl;

heterocyclyl is a 5 to 10-membered aliphatic, mono- or bicyclic heterocycle, containing one or more heteroatoms chosen from N, O and S;

or the racemates, enantiomers, diastereoisomers and mixtures thereof, the tautomers or the physiologically acceptable salts thereof.

13. (Currently amended) [[A]] The method ~~for inhibiting CDK2 in a patient requiring such treatment comprising administering a physiologically active amount of a compound according to claim 5~~ according to claim 9, wherein in the formula (I)

A is A1;

R is unsubstituted or at least monosubstituted aryl-(C_1-C_6-alkyl)- heteroaryl-(C_1-C_6-alkyl)- or heterocyclyl-(C_1-C_6-alkyl)-,

where the substituents are chosen from halogen, C_1-C_6-alkyl, -OH, -O-aryl, C_1-C_6-alkoxy, -O-(C_1-C_6-alkylen)-N(C_1-C_6-alkyl)$_2$, -C(O)OH, -C(O)O-(C_1-C_6-alkyl), -NH_2, -N(C_1-C_6-alkyl)$_2$, -NH(C_1-C_6-alkyl), -NH(C_1-C_{10}-cycloalkyl), -C(O)NH_2, -C(O)NH-heteroaryl, -C(O)NH-(C_1-C_6-alkyl), -SO_2(C_1-C_6-alkyl), -SO_2NH_2, -C(O)-heterocyclyl, -C(NH)NH_2, heterocyclyl, aryl-(C_1-C_6-alkyl)-, aryl, trifluoromethyl, and trifluoromethoxy,

and the substituents aryl, heterocyclyl and heteroaryl may further be at least monosubstituted with C_1-C_3-alkyl, C_1-C_3-alkoxy, fluorine, chlorine, bromine, trifluoromethyl, trifluoromethoxy or OH;

heteroaryl is imidazolyl, thiophenyl, furanyl, isoxazolyl, pyridinyl, pyrimidinyl, benzoimidazolyl, indolyl or benzodioxolyl;

aryl is phenyl or naphthyl;

heterocyclyl is morpholinyl, piperazinyl or piperidinyl;

or the racemates, enantiomers, diastereoisomers and mixtures thereof, the tautomers or the physiologically acceptable salts thereof.

14. (Currently amended) [[A]] The method ~~for inhibiting CDK2 in a patient requiring such treatment comprising administering a physiologically active amount of a compound according to claim 6~~ according to claim 9, wherein in the formula (I)

A is A1;

Ar is unsubstituted or at least monosubstituted phenyl, pyridin-4-yl or pyrimidin-4-yl,

where the substituents are chosen from halogen, C_1-C_6-alkyl, -OH, C_1-C_6-alkoxy, -C(O)OH, -C(O)O-(C_1-C_6-alkyl), -NH_2, -N(C_1-C_6-alkyl)$_2$, -NH(C_1-C_6-alkyl), -NH(C_1-C_{10}-cycloalkyl), -NH(heterocyclyl-(C_1-C_6-alkyl-)), -NH(aryl-(C_1-C_6-alkyl-)), -C(O)NH_2, -C(O)NH-(C_1-C_6-alkyl), aryl, and heteroaryl,

and the substituents aryl, heterocyclyl and heteroaryl may further be at least monosubstituted with C_1-C_3-alkyl, C_1-C_3-alkoxy, fluorine, chlorine, bromine, trifluoromethyl, trifluoromethoxy or OH;

heteroaryl is pyridinyl or pyrimidinyl;

aryl is phenyl or naphthyl;

heterocyclyl is morpholinyl, piperazinyl or piperidinyl;

or the racemates, enantiomers, diastereoisomers and mixtures thereof, the tautomers or the physiologically acceptable salts thereof.

15. (Currently amended) [[A]] The method ~~for inhibiting CDK2 in a patient requiring such treatment comprising administering a physiologically active amount of a compound according to claim 7~~ according to claim 9, wherein in the formula (I)

A is A1;

R is unsubstituted or at least monosubstituted benzyl, phenylethyl-, phenylpropyl-, piperazinylpropyl-, pyridinylmethyl-, pyridinylethyl- or pyridinylpropyl-,

where the substituents are chosen from chlorine, bromine, fluorine, trifluoromethyl, methyl, ethyl, propyl, methoxycarbonyl and carboxy;

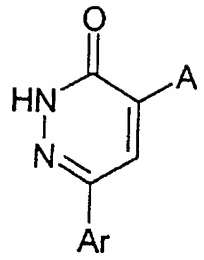
Ar is unsubstituted or at least monosubstituted pyridin-4-yl, pyrimidin-4-yl or phenyl,

where the substituents are chosen from methylamino-, ethylamino-, propylamino-, butylamino-, hydroxy, methoxy, ethoxy, methyl, ethyl, propyl, (phenylethyl)amino-, benzylamino-, and (morpholinylethyl)amino-;

or the racemates, enantiomers, diastereoisomers and mixtures thereof, the tautomers or the physiologically acceptable salts thereof.

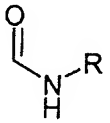
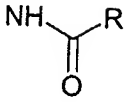
16. (Original) A method for inhibiting CDK2 in a patient requiring such treatment comprising administering a physiologically active amount of a compound according to claim 8.

17. (Currently amended) A method for treating a patient suffering from cancer, which method comprises administering a physiologically active amount of a compound ~~according to claim 1~~ of formula (I)



(I)

wherein A represents A1 or A2

A1 =  A2 = 

;

R is unsubstituted or at least monosubstituted C_1-C_{10}-alkyl, aryl, aryl-(C_1-C_{10}-alkyl)-, heteroaryl, heteroaryl-(C_1-C_{10}-alkyl)-, heterocyclyl, heterocyclyl-(C_1-C_{10}-alkyl)-, C_3-C_{10}-cycloalkyl, polycycloalkyl, C_2-C_{10}-alkenyl or C_2-C_{10}-alkinyl,

where the substituents are chosen from halogen, -CN, C_1-C_{10}-alkyl, -NO_2, -OR1, -C(O)OR1, -O-C(O)R1, -NR1R2, -NHC(O)R1, -C(O)NR1R2, -SR1, -S(O)R1, -SO_2R1, -$NHSO_2$R1, -SO_2NR1R2, -C(S)NR1R2, -NHC(S)R1, -O-SO_2R1, -SO_2-O-R1, oxo, -C(O)R1, -C(NH)NH_2, heterocyclyl, C_3-C_{10}-cycloalkyl, aryl-(C_1-C_6-alkyl)-, aryl, heteroaryl, trifluoromethyl, trifluoromethylsulfanyl and trifluoromethoxy,

and the substituents aryl, heterocyclyl and heteroaryl may further be at least monosubstituted with C_1-C_6-alkyl, C_1-C_6-alkoxy, halogen, trifluoromethyl, trifluoromethoxy or OH;

Ar is unsubstituted or at least monosubstituted aryl or heteroaryl;

where the substituents are chosen from halogen, -CN, NO_2, C_1-C_{10}-alkyl, -OR1, -C(O)OR1, -O-C(O)R1, -NR1R2, -NHC(O)R1, -C(O)NR1R2, -NHC(S)R1, -C(S)NR1R2, -SR1, -S(O)R1, -SO_2R1,

-$NHSO_2R1$, -SO_2NR1R2, -O-SO_2R1, -SO_2-O-R1, aryl, heteroaryl, aryl-(C_1-C_6-alkyl)-, formyl, trifluoromethyl and trifluoromethoxy,

and the substituents aryl and heteroaryl may further be at least monosubstituted with C_1-C_6-alkyl, C_1-C_6-alkoxy, halogen, trifluoromethyl, trifluoromethoxy or OH;

R1 and R2, independently from each other, are

hydrogen;

unsubstituted or at least monosubstituted C_1-C_{10}-alkyl, C_3-C_{10}-cycloalkyl, aryl, aryl-(C_1-C_{10}-alkyl)-, C_2-C_{10}-alkenyl, C_2-C_{10}-alkinyl, heterocyclyl, heterocyclyl-(C_1-C_{10}-alkyl)- or heteroaryl, where the substituents are chosen from halogen, C_1-C_6-alkyl, C_1-C_6-alkoxy, CN, NO_2 , NH_2, (C_1-C_6-alkyl)amino-, di(C_1-C_6-alkyl)amino-, OH, COOH, -COO-(C_1-C_6-alkyl), -$CONH_2$, formyl, trifluoromethyl and trifluoromethoxy;

heteroaryl is a 5 to 10-membered, aromatic, mono- or bicyclic heterocycle containing one or more heteroatoms chosen from N, O and S;

aryl is phenyl, indanyl, indenyl or naphthyl;

heterocyclyl is a 5 to 10-membered, aliphatic, mono- or bicyclic heterocycle containing one or more heteroatoms chosen from N, O and S;

or the racemates, enantiomers, diastereoisomers and mixtures thereof, the tautomers or the physiologically acceptable salts thereof;

with the proviso that
(1) A is not -C(O)NH(C_1-C_6-alkyl), when Ar is phenyl which is at least monosubstituted with heterocyclyl or heteroaryl containing nitrogen,

(2) the compound is not 6-(4-cyanophenyl)-4[(4-carboxybutyl)-aminocarbonyl]-2H-pyridazin-3-one or 6-(4-methoxyphenyl)-4-methylcarbamoyl-2H-pyridazin-3-one, and

(3) when A is $NHCOCH(CH_3)_2$, Ar is not unsubstituted or at least monosubstituted bicyclic heteroaryl.

18. (Currently amended) [[A]] The method ~~for treating a patient suffering from cancer, which method comprises administering a physiologically active amount of a compound according to claim 2~~ according to claim 17, wherein in the formula (I)

A is A1;

R is unsubstituted or at least monosubstituted C_1-C_{10}-alkyl, aryl, aryl-(C_1-C_{10}-alkyl)-, heteroaryl, heteroaryl-(C_1-C_{10}-alkyl)-, heterocyclyl, heterocyclyl-(C_1-C_{10}-alkyl)-, C_3-C_{10}-cycloalkyl, polycycloalkyl, C_2-C_{10}-alkenyl or C_2-C_{10}-alkinyl,

where the substituents are chosen from halogen, -CN, C_1-C_{10}-alkyl, $-NO_2$, -OR1, -C(O)OR1, -O-C(O)R1, -NR1R2, -NHC(O)R1, -C(O)NR1R2, -SR1, -S(O)R1, $-SO_2R1$, $-NHSO_2R1$, $-SO_2NR1R2$, -C(S)NR1R2, -NHC(S)R1, $-O-SO_2R1$, $-SO_2-O-R1$, oxo, -C(O)R1, $-C(NH)NH_2$, heterocyclyl, C_3-C_{10}-cycloalkyl, aryl-(C_1-C_6-alkyl)-, aryl, heteroaryl, trifluoromethyl, trifluoromethylsulfanyl and trifluoromethoxy,

and the substituents aryl, heterocyclyl and heteroaryl may further be at least monosubstituted with C_1-C_6-alkyl, C_1-C_6-alkoxy, halogen, trifluoromethyl, trifluoromethoxy or OH;

R1 and R2, independently from each other, are

hydrogen;

unsubstituted or at least monosubstituted C_1-C_{10}-alkyl, C_3-C_{10}-cycloalkyl, aryl, aryl-(C_1-C_{10}-alkyl)-, C_2-C_{10}-alkenyl, C_2-C_{10}-alkinyl, heterocyclyl, heterocyclyl-(C_1-C_{10}-alkyl)- or heteroaryl, where the substituents are chosen from halogen, C_1-C_6-alkyl, C_1-C_6-alkoxy, CN, NO_2 , NH_2, (C_1-C_6-alkyl)amino-, di(C_1-C_6-alkyl)amino-, OH, COOH, -COO-(C_1-C_6-alkyl), -$CONH_2$, formyl, trifluoromethyl and trifluoromethoxy;

heteroaryl is a 5 to 10-membered, aromatic, mono- or bicyclic heterocycle containing one or more heteroatoms chosen from N, O and S;

aryl is phenyl, indanyl, indenyl or naphthyl;

heterocyclyl is a 5 to 10-membered, aliphatic, mono- or bicyclic heterocycle containing one or more heteroatoms chosen from N, O and S;

or the racemates, enantiomers, diastereoisomers and mixtures thereof, the tautomers or the physiologically acceptable salts thereof.

19. (Currently amended) [[A]] The method ~~for treating a patient suffering from cancer, which method comprises administering a physiologically active amount of a compound according to claim 3~~ according to claim 17, wherein in the formula (I)

R is unsubstituted or at least monosubstituted C_1-C_{10}-alkyl, aryl, aryl-(C_1-C_{10}-alkyl)-, heterocyclyl, heterocyclyl-(C_1-C_{10}-alkyl)-, C_3-C_{10}-cycloalkyl, heteroaryl or heteroaryl-(C_1-C_{10}-alkyl)-,

where the substituents are chosen from halogen, -CN, C_1-C_{10}-alkyl, -NO_2, -OR1, -C(O)OR1, -O-C(O)R1, -NR1R2, -NHC(O)R1, -C(O)NR1R2, -SR1, -S(O)R1, -SO_2R1, -$NHSO_2$R1, -SO_2NR1R2, -C(S)NR1R2, -NHC(S)R1, -O-SO_2R1, -SO_2-O-R1, oxo, -C(O)R1, -C(NH)NH_2, heterocyclyl, C_3-C_{10}-cycloalkyl, aryl-(C_1-C_6-alkyl)-, aryl, heteroaryl, trifluoromethyl, trifluoromethylsulfanyl and trifluoromethoxy,

and the substituents aryl, heterocyclyl and heteroaryl may further be at least monosubstituted with C_1-C_6-alkyl, C_1-C_6-alkoxy, halogen, trifluoromethyl, trifluoroethoxy or OH;

R1 and R2, independently from each other, are

hydrogen;

unsubstituted or at least monosubstituted C_1-C_{10}-alkyl, C_3-C_{10}-cycloalkyl, aryl, aryl-(C_1-C_{10}-alkyl)-, C_2-C_{10}-alkenyl, C_2-C_{10}-alkinyl, heterocyclyl, heterocyclyl-(C_1-C_{10}-alkyl)- or heteroaryl, where the substituents are chosen from halogen, C_1-C_6-alkyl, C_1-C_6-alkoxy, CN, NO_2 , NH_2, (C_1-C_6-alkyl)ami no-, di(C_1-C_6-alkyl)amino-, OH, COOH, -COO-(C_1-C_6-alkyl), -$CONH_2$, formyl, trifluoromethyl and trifluoromethoxy;

heteroaryl is a 5 to 10-membered, aromatic, mono- or bicyclic heterocycle containing one or more heteroatoms chosen from N, O and S;

aryl is phenyl, indanyl, indenyl or naphthyl;

heterocyclyl is a 5 to 10-membered, aliphatic, mono- or bicyclic heterocycle, containing one or more heteroatoms chosen from N, O and S;

or the racemates, enantiomers, diastereoisomers and mixtures thereof, the tautomers or the physiologically acceptable salts thereof.

20. (Currently amended) [[A]] The method ~~for treating a patient suffering from cancer, which method comprises administering a physiologically active amount of a compound according to claim 4~~ according to claim 17, wherein in the formula (I)

Ar is unsubstituted or at least monosubstituted phenyl, pyridinyl, pyrimidinyl, pyrazolyl, thiophenyl, isoxazolyl, benzo[b]thiophenyl, benzodioxolyl or thiazolo[3,2-b][1,2,4]-thiazolyl,

where the substituents are chosen from halogen, -CN, NO_2, C_1-C_{10}-alkyl, -OR1, -C(O)OR1, -O-C(O)R1, -NR1R2, -NHC(O)R1, -C(O)NR1R2, -NHC(S)R1, -C(S)NR1R2, -SR1, -S(O)R1, $-SO_2R1$, $-NHSO_2R1$, $-SO_2NR1R2$, $-O-SO_2R1$, $-SO_2-O-R1$, aryl, heteroaryl, aryl-(C_1-C_6-alkyl)-, formyl, trifluoromethyl and trifluoromethoxy,

and the substituents aryl and heteroaryl may further be at least monosubstituted with C_1-C_6-alkyl, C_1-C_6-alkoxy, halogen, trifluoromethyl, trifluoromethoxy or OH;

R1 and R2, independently from each other, are

hydrogen;

unsubstituted or at least monosubstituted C_1-C_{10}-alkyl, C_3-C_{10}-cycloalkyl, aryl, aryl-(C_1-C_{10}-alkyl)-, C_2-C_{10}-alkenyl, C_2-C_{10}-alkinyl, heterocyclyl, heterocyclyl-(C_1-C_{10}-alkyl)- or heteroaryl, where the substituents are chosen from halogen, C_1-C_6-alkyl, C_1-C_6-alkoxy, CN, NO_2 , NH_2, (C_1-C_6-alkyl) amino-, di(C_1-C_6-alkyl)amino-, OH, COOH, -COO-(C_1-C_6-alkyl), $-CONH_2$, formyl, trifluoromethyl and trifluoromethoxy;

heteroaryl is a 5 to 10-membered aromatic, mono- or bicyclic heterocycle, containing one or more heteroatoms chosen from N, O and S;

aryl is phenyl, indanyl, indenyl or naphthyl;

heterocyclyl is a 5 to 10-membered aliphatic, mono- or bicyclic heterocycle, containing one or more heteroatoms chosen from N, O and S;

or the racemates, enantiomers, diastereoisomers and mixtures thereof, the tautomers or the physiologically acceptable salts thereof.

21. (Currently amended) [[A]] The method ~~for treating a patient suffering from cancer, which method comprises administering a physiologically active amount of a compound according to claim 5~~ according to claim 17, wherein in the formula (I)

A is A1;

R is unsubstituted or at least monosubstituted aryl-(C_1-C_6-alkyl)- heteroaryl-(C_1-C_6-alkyl)- or heterocyclyl-(C_1-C_6-alkyl)-,

where the substituents are chosen from halogen, C_1-C_6-alkyl, -OH, -O-aryl, C_1-C_6-alkoxy, -O-(C_1-C_6-alkylen)-N(C_1-C_6-alkyl)$_2$, -C(O)OH, -C(O)O-(C_1-C_6-alkyl), -NH_2, -N(C_1-C_6-alkyl)$_2$, -NH(C_1-C_6-alkyl), -NH(C_1-C_{10}-cycloalkyl), -C(O)NH_2, -C(O)NH-heteroaryl, -C(O)NH-(C_1-C_6-alkyl), -SO_2(C_1-C_6-alkyl), -SO_2NH_2, -C(O)-heterocyclyl, -C(NH)NH_2, heterocyclyl, aryl-(C_1-C_6-alkyl)-, aryl, trifluoromethyl, and trifluoromethoxy,

and the substituents aryl, heterocyclyl and heteroaryl may further be at least monosubstituted with C_1-C_3-alkyl, C_1-C_3-alkoxy, fluorine, chlorine, bromine, trifluoromethyl, trifluoromethoxy or OH;

heteroaryl is imidazolyl, thiophenyl, furanyl, isoxazolyl, pyridinyl, pyrimidinyl, benzoimidazolyl, indolyl or benzodioxolyl;

aryl is phenyl or naphthyl;

heterocyclyl is morpholinyl, piperazinyl or piperidinyl;

or the racemates, enantiomers, diastereoisomers and mixtures thereof, the tautomers or the physiologically acceptable salts thereof.

22. (Currently amended) [[A]] The method ~~for treating a patient suffering from cancer, which method comprises administering a physiologically active amount of a compound according to claim 6~~ according to claim 17, wherein in the formula (I)

A is A1;

Ar is unsubstituted or at least monosubstituted phenyl, pyridin-4-yl or pyrimidin-4-yl,

where the substituents are chosen from halogen, C_1-C_6-alkyl, -OH, C_1-C_6-alkoxy, -C(O)OH, -C(O)O-(C_1-C_6-alkyl), $-NH_2$, -N(C_1-C_6-alkyl)$_2$, -NH(C_1-C_6-alkyl), -NH(C_1-C_{10}-cycloalkyl), -NH(heterocyclyl-(C_1-C_6-alkyl-)), -NH(aryl-(C_1-C_6-alkyl-)), $-C(O)NH_2$, -C(O)NH-(C_1-C_6-alkyl), aryl, and heteroaryl,

and the substituents aryl, heterocyclyl and heteroaryl may further be at least monosubstituted with C_1-C_3-alkyl, C_1-C_3-alkoxy, fluorine, chlorine, bromine, trifluoromethyl, trifluoromethoxy or OH;

heteroaryl is pyridinyl or pyrimidinyl;

aryl is phenyl or naphthyl;

heterocyclyl is morpholinyl, piperazinyl or piperidinyl;

or the racemates, enantiomers, diastereoisomers and mixtures thereof, the tautomers or the physiologically acceptable salts thereof.

23. (Currently amended) [[A]] The method ~~for treating a patient suffering from cancer, which method comprises administering a physiologically active amount of a compound according to claim 7~~ according to claim 17, wherein in the formula (I)

A is A1;

R is unsubstituted or at least monosubstituted benzyl, phenylethyl-, phenylpropyl-, piperazinylpropyl-, pyridinylmethyl-, pyridinylethyl- or pyridinylpropyl-,

where the substituents are chosen from chlorine, bromine, fluorine, trifluoromethyl, methyl, ethyl, propyl, methoxycarbonyl and carboxy;

Ar is unsubstituted or at least monosubstituted pyridin-4-yl, pyrimidin-4-yl or phenyl,

where the substituents are chosen from methylamino-, ethylamino-, propylamino-, butylamino-, hydroxy, methoxy, ethoxy, methyl, ethyl, propyl, (phenylethyl)amino-, benzylamino-, and (morpholinylethyl)amino-;

or the racemates, enantiomers, diastereoisomers and mixtures thereof, the tautomers or the physiologically acceptable salts thereof.

24. (Original) A method for treating a patient suffering from cancer, which method comprises administering a physiologically active amount of a compound according to claim 8.

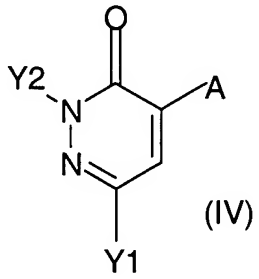
25. (Original) The method according to claim 17, wherein the cancer is a solid tumor.

26. (Original) A pharmaceutical preparation comprising an effective dose of at least one compound or a physiologically acceptable salt thereof as defined in claim 1 and a physiologically acceptable carrier.

27. (Original) The pharmaceutical preparation according to claim 26, which pharmaceutical preparation is in the form of a pill, tablet, lozenge, coated tablet, granule, capsule, hard or soft gelatin capsule, aqueous solution, alcoholic solution, oily solution, syrup, emulsion suspension, pastille, suppository, solution for injection or infusion, ointment, tincture, cream, lotion, powder, spray, transdermal therapeutic systems, nasal spray, aerosol mixture, microcapsule, implant, rod or plaster.

28. (Currently amended) A method for the synthesis of a compound of formula (I) according to claim 1, wherein

a) a compound of formula (IV)

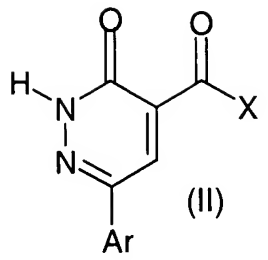


(IV)

wherein Y1 is halogen, $B(OH)_2$ or $Sn(C_1\text{-}C_{10}\text{-alkyl})$ and
Y2 is H or a protecting group,
is converted with Ar-Z in presence of a palladium complex, where Z is $B(OH)_2$, $B(C_1\text{-}C_{10}\text{-alkoxy})_2$, $Sn(C_1\text{-}C_{10}\text{-alkyl})_3$, $Zn\text{-}(C_1\text{-}C_{10}\text{-alkyl})$ or halogen,

or

b) ~~with the proviso that~~ in formula (I) when A is A1, a compound of formula (II)



(II)

wherein X is -OH, C_1-C_{10}-alkoxy, chlorine or -O-C(O)O-(C_1-C_{10}-alkyl), is converted with RNH_2 .